solar energy

energy from the sun that is converted into thermal or electrical energy; "the amount of energy falling on the earth is given by the solar constant ...
wordnetweb.princeton.edu/perl/webwn

- Solar energy includes ultra-violet radiation, visible radiation, and infra-red radiation.
  www.epa.gov/climateforaction/learn/glossary.htm

Additional Information On Solar Energy

Solar energy is vital to support life on earth, it helps to grow our food, light our days, influence weather patterns, provide heat, and can be used to generate solar electricity.

Solar electricity relies upon man-made devices such as solar panels or solar cells in order to provide a source of clean, and low cost renewable energy.

http://www.clean-energy-ideas.com/energy_definitions/definition_of_solar_energy.html

We have used energy from the sun to provide electricity for many years, in the form of solar cell calculators and other small, low energy consuming devices.

As solar energy technologies become more advanced, we are able to exploit the energy we receive from the sun to provide a greater, significant amount of our electricity or even hot water (when using solar hot water panels).

The solar energy definition above mentions how energy from the sun is transported to earth through the form of solar radiation. Photons contained in this solar radiation makes the generation of electricity from the suns rays possible.

Solar energy is also partly responsible for wind energy, as wind patterns are greatly influenced by the sun. Also, the sun is responsible for heating the ground beneath our feet to a significant degree to support the use of geothermal, ground source heat pumps.

Without the existence of solar energy, human life could not be supported on planet earth due to many different factors.

A quick definition for an answer to the question **what is solar power**?, can be described as below.

Solar power is electricity generated from the levels of natural energy contained within the suns rays (solar radiation).

We shall now take a deeper look into the energy from the sun, and the ways in which we can use this energy.

The sun has been in existence for billions of years. Everyday, the sun shines down on our earth, shooting its solar energy in our direction. This solar energy is commonly known as solar radiation, and contains a significant amount of energy we are able to harness.

The suns rays contain photons. These photons are capable of transforming electrons into conduction electrons, which means they are able to carry an electrical charge.

http://www.clean-energy-ideas.com/articles/what_is_solar_power.html

The answer to the question of **how do you produce electricity from solar energy** is fairly easy to understand once you have a slight knowledge of the subject.

Before you are able to produce electricity through solar energy, there needs to be some form of solar cell or panel.

The solar panels are made of a semi-conductive material, the most common material is silicon.

The semi-conductive material contains electrons which are quite happy just sitting there.

When photons (contained within the suns rays) hit the solar cells, the electrons absorb this solar energy, transforming them into conduction electrons.

If the energy of these photons is great enough, then the electrons are able to become free, and carry an electric charge through a circuit to the destination.

Any electrons that do not receive enough energy simply warm up, which heats your cell or panel, resulting in lowering the efficiency of the cell.

The lowering in efficiency is down to two main factors and they are; that the cell is not working to its full potential (e.g. some electrons may be lost), the second factor is when the electrons release heat, the panel also becomes warm, interfering with other aspects of the solar cells.

The more solar cells contained in a solar panel, or solar array, means the more output you will receive.

Quality cells are also a major factor in efficiency. If you purchase more expensivenatural energy technologies, you are more likely to have a more efficient cell.

Another factor which affects solar panel efficiency is location. Obviously nearer the equator, you will receive a slightly better output with a given cell, but solar cells should always be facing the direction of the sun, and have no objects blocking the suns rays.

http://www.clean-energy-ideas.com/articles/how_do_you_produce_electricity_from_solar_energy.html

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This article is about all uses of solar energy. For generation of electricity using solar energy, see Solar power.